

ABSTRACT OF THE DISCLOSURE

Methods are provided for manipulating nucleic acid to produce gene fusions, to delete or clone a portion of a chromosome, or to insert a sequence into a chromosome. The methods employ sequential transposition processes using two or more pairs of inverted repeat transposase-interacting sequences on a transposable polynucleotide wherein each pair of transposase-interacting sequences interacts with a distinct transposase enzyme.

1. A method for manipulating nucleic acid to produce gene fusions, to delete or clone a portion of a chromosome, or to insert a sequence into a chromosome, comprising:
a) providing a transposable polynucleotide having two or more pairs of inverted repeat transposase-interacting sequences;
b) providing two or more distinct transposase enzymes;
c) sequentially interacting each pair of inverted repeat transposase-interacting sequences with a distinct transposase enzyme to produce a manipulated nucleic acid.